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What is Claimed:

- 1 1. An FM transmitter with integrated modulator used to transfer text
2 data from an auxiliary audio device to an FM receiver comprising

3 a processor, coupled to the auxiliary audio device, that receives the text
4 data to be transmitted to the FM receiver and processes the data to develop a processed
5 data signal;

6 a signal combiner that combines the processed data signal with an audio
7 signal provided by the consumer electronic device and encoded according to a frequency
8 modulation (FM) standard to generate a composite FM signal for transmission to the FM
9 receiver.
- 1 2. An integrated transmitter according to claim 1, wherein:

2 the processor is configured to process the data signal according to a radio
3 data system (RDS) standard to generate a modulated RDS signal as the processed data
4 signal; and

5 the signal combiner sums the processed data signal and the encoded audio
6 signals.
- 1 3. An integrated transmitter according to claim 2, wherein the processor
2 is a programmed processor including software that controls the processor to generate the
3 modulated RDS signal as the processed data signal.
- 1 4. An integrated transmitter according to claim 2, further including:

2 an analog FM stereo encoder which generates the FM encoded audio signal
3 as an analog FM encoded audio signal;

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4 a digital to analog converter coupled to the processor to receive the
5 processed data signal and to provide an analog data signal corresponding to the processed
6 data signal; and

7 a band-pass filter that filters the analog data signal to exclude signal
8 components outside of a range of frequencies acceptable for an RDS modulated signal;

9 wherein the signal combiner sums the band-pass filtered analog data signal
10 and the analog FM signal to produce the composite FM signal.

1 5. An integrated transmitter according to claim 2, wherein:

2 the processor is configured to receive a digital audio input signal and to
3 encode the digital audio signal to provide a digital FM encoded audio signal; and

4 the signal combiner is summing circuitry in the processor that sums the
5 digital FM encoded audio signal and the modulated RDS signal to generate the composite
6 FM signal.

1 6. An integrated transmitter according to claim 1, wherein:

2 the processor is configured to convert the text data into speech to provide a
3 speech signal and to encode the speech signal as an FM data signal to provide the FM data
4 signal as the processed data signal; and

5 the signal combiner time-division multiplexes the FM data signal and the FM
6 encoded audio signal to generate the composite FM signal.

1 7. An integrated transmitter according to claim 6, wherein the processor
2 is a programmed processor including software that controls the processor to convert the
3 text data into speech to provide the speech and to encode the speech signal as an FM data
4 signal to provide the FM data signal as the processed data signal.

1 8. An integrated transmitter according to claim 6, wherein:

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2 the processor is configured to receive a digital audio input signal and to
3 encode the digital audio signal to provide a digital FM encoded audio signal; and

4 the signal combiner is multiplexing circuitry in the processor that time-
5 division multiplexes the digital FM encoded audio signal and the FM data signal to generate
6 the composite FM signal.

1 9. An integrated transmitter according to claim 1, wherein the processor
2 is the control processor of the auxiliary audio device.

1 10. An integrated transmitter according claim 9, wherein the auxiliary
2 audio device is a device selected from a group consisting of a CD player, a CD-MP3 player,
3 a universal satellite receiver and a digital audio broadcast receiver.

1 11. An integrated transmitter according to claim 10, further including a
2 wireless remote control receiver, coupled to the auxiliary audio device to receive
3 commands to control the auxiliary audio device and to receive commands to select text
4 data to be transmitted to the FM receiver.

1 12. An integrated transmitter according to claim 1, wherein the processor
2 and signal combiner are implemented as a separate device that is configured to be
3 attached to line and data output terminals of the auxiliary audio device.